Transcatheter correction of partial anomalous pulmonary venous connection

Pediatric Heart Center and Center for Congenital Heart Defects, Heart and Diabetes Center NRW, Bad Oeynhausen, Germany (1); Pediatric Cardiosurgery and Congenital Heart Defects, Heart and Diabetes Center NRW, Bad Oeynhausen, Germany (2)

Introduction: Partial anomalous pulmonary venous Drainage is an extremely rare congenital Defect. Patients with a partial anomalous pulmonary venous Drainage, if symptomatic or showing significant shunting, are generally treated with surgery. Method: A Fifteen-year-old adolescent was admitted to our Department suffering from reduced exercise tolerance and Dyspnea at exercise. The echocardiogram revealed a dilated right ventricle without atrial septal defect. The patient underwent cardiac MRI, which showed a left pulmonary vein draining to the hepatic veins with minimal drainage to left atrium. A cardiac catheterization was performed: Angiography revealed A significant left-to-right shunt via the anomalous venous connection from the left pulmonary vein via a vertical vein into liver veins and a minimal Shunt from the single left pulmonary vein into left atrium (dual drainage). After occlusion of the vertical vein with a 30 mm Sizing balloon angiography of the left pulmonary artery revealed drainage of the left pulmonary vein to left atrium without any obstruction. A 16 mm Amplatzer Vascular Plug II (AVP II) was used to occlude the vertical vein. Result: After deploying of the 16 mm AVP II angiography showed an unobstructed blood drainage to the left atrium, no residual leak over the vertical vein. Conclusion: Transcatheter therapy In partially abnormal pulmonary venous return with dual drainage is feasible and safe. It offers a good alternative to surgery in selected cases.